



Crescent Point

VISUAL INSPECTION REPORT-PRESSURE VESSEL

Inspection Type <input checked="" type="checkbox"/> External <input checked="" type="checkbox"/> Internal													
Date:			February 7, 2018				Description:			<input checked="" type="checkbox"/> Vessel <input type="checkbox"/> Exchanger <input type="checkbox"/> Furnace <input type="checkbox"/> Boiler			
Inspector:			Ryan Hogg				Unit #:			Equip #:		848875	
Agent Co:			101292687 Saskatchewan LTD				Equip. Name:			Filter			
Location/LSD			BAT/09-32-001-28W1				CRN #:			T4605.4			
Province:			Manitoba				Manufacturer:			ESS Corp.			
Area:			Run 009 – Ingoldsby/Pierson				Year Built:		2014	S/N:	4551-A		
Subarea:			Battery 09-32-001-28W1				Jurisdiction #:			PWHT			
Service			<input type="checkbox"/> Sweet <input checked="" type="checkbox"/> Sour <input type="checkbox"/> Other: _____				PSV Location			Choose an item.		MDMT	-20F
Vessel MAWP			150 PSI				Vessel MAWT			100 F		RT	
PSV Data	Set P	CPE#	Manufacturer	S/N	In. Sz.	Out. Sz.	Serv. Co.	Serv. Date	IV	CSO	Capacity		
Shell Side									Y/N	Y/N			
Tube Side									Y/N	Y/N			
Other									Y/N	Y/N			
Components		Material	Nominal t	CA	Retire t	Lowest t	t OK?	Calc. t-min	Comment				
	Shell					0.297"	<input type="checkbox"/> Y <input type="checkbox"/> N						
	Head						<input type="checkbox"/> Y <input type="checkbox"/> N						
	Channel						<input type="checkbox"/> Y <input type="checkbox"/> N						
	Tube						<input type="checkbox"/> Y <input type="checkbox"/> N						
Other							<input type="checkbox"/> Y <input type="checkbox"/> N		Specify:				
External Visual Inspection													
Orientation		<input type="checkbox"/> Hor. <input checked="" type="checkbox"/> Ver.		Foundation		<input type="checkbox"/> Concrete <input type="checkbox"/> Gravel <input type="checkbox"/> Timbers <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other:			Condition Welded to building floor				
Support		<input type="checkbox"/> Saddle		<input type="checkbox"/> Seal-welded		<input type="checkbox"/> Free to Move		Condition					
		<input type="checkbox"/> Skirt		<input type="checkbox"/> Free of debris		Comment:							
		<input type="checkbox"/> Hangers		<input type="checkbox"/> Secure		Comment:							
		<input checked="" type="checkbox"/> Other		Specify: Steel Legs to floor		Condition Secure							
Overall		General Condition Externally painted inside building, minor scrapes and marks						Electrical grounding: <input type="checkbox"/> Direct <input checked="" type="checkbox"/> Indirect <input type="checkbox"/> None					
Ext. Surface		<input checked="" type="checkbox"/> Painted <input type="checkbox"/> Insulated <input type="checkbox"/> Fire-proofed <input type="checkbox"/> Cladded <input type="checkbox"/> Other : _____		Condition Minor marks									
Ext. Fixtures		<input type="checkbox"/> Ladder <input type="checkbox"/> Platform(s) <input type="checkbox"/> Other:					Condition						
Nozzles		<input type="checkbox"/> Manway <input checked="" type="checkbox"/> Port		Size: Removable top head			<input type="checkbox"/> Reinforcement Pads used		<input type="checkbox"/> Weep Holes Present				
		Comment:											
Davit Arm		<input checked="" type="checkbox"/> Present		<input type="checkbox"/> Greased		<input type="checkbox"/> Double Nut		Condition					



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Piping	<input type="checkbox"/> PSV	<input type="checkbox"/> Supported <input type="checkbox"/> Joined per code	<input type="checkbox"/> Drains Properly <input type="checkbox"/> Well Coated	Comment
	<input checked="" type="checkbox"/> Inlet	<input checked="" type="checkbox"/> Supported <input checked="" type="checkbox"/> Joined per code	<input checked="" type="checkbox"/> Free from leaks <input type="checkbox"/> Well Coated	Comment
	<input checked="" type="checkbox"/> Outlet	<input checked="" type="checkbox"/> Supported <input checked="" type="checkbox"/> Joined per code	<input checked="" type="checkbox"/> Free from leaks <input type="checkbox"/> Well Coated	Comment
	<input checked="" type="checkbox"/> Drain	<input checked="" type="checkbox"/> Supported <input checked="" type="checkbox"/> Joined per code	<input checked="" type="checkbox"/> Free from leaks <input type="checkbox"/> Well Coated	Comment
	<input checked="" type="checkbox"/> Instrumentation <input type="checkbox"/> Process Fluid Identified	<input checked="" type="checkbox"/> Supported <input checked="" type="checkbox"/> Joined per code	<input checked="" type="checkbox"/> Free from leaks/kinks <input type="checkbox"/> Flow direction marked	Comment Comment
Valves	<input checked="" type="checkbox"/> Manual Isolation Valve		<input checked="" type="checkbox"/> Free from leaks	Comment
	<input type="checkbox"/> Automated Control Valve		<input type="checkbox"/> Free from leaks	Comment
	<input type="checkbox"/> Vents and Drain plugged		<input type="checkbox"/> Free from leaks	Comment
Gauges	<input checked="" type="checkbox"/> Pressure	Reading: 0 PSI	Condition Clean and readable	
	<input type="checkbox"/> Temperature	Reading:	Condition	
Sight Glass	<input type="checkbox"/> Fluid Level	Reading:	Condition	
External Inspection Notes: No damages externally				
Internal Visual Inspection				
Date:	February 7, 2018	Inspector	Ryan Hogg	
Scope:	A visual internal (VI) inspection was performed on all accessible shell and head surfaces, nozzles, welds, etc.			
Access:	<input checked="" type="checkbox"/> Manway	<input type="checkbox"/> Hand-hole	<input type="checkbox"/> Inspection Nozzle	Diameter: Top head removed
Opening	Gasket Surfaces:	<input checked="" type="checkbox"/> Compliant with code	Comment	
	Nozzle Tube:	<input type="checkbox"/> No pitting, erosion, etc.	Comment	
Shell and Head Surfaces	Uniform Corrosion:	<input checked="" type="checkbox"/> Insignificant amount	Comment	
	Pitting Corrosion:	<input type="checkbox"/> None noted	Comment Pitting throughout bottom head	
	Erosion:	<input checked="" type="checkbox"/> None noted	Comment	
	Mechanical Damage:	<input checked="" type="checkbox"/> None noted	Comment	
Welds	Uniform Corrosion:	<input checked="" type="checkbox"/> Insignificant amount	Comment	
	Pitting Corrosion:	<input type="checkbox"/> None noted	Comment Pitting throughout filter plate to shell weld	
	Welding Defects:	<input checked="" type="checkbox"/> None noted	Comment	
NDE	<input checked="" type="checkbox"/> NDT was performed by: Ryan Hogg	Extent: Bottom head externally		
	NDE Type: UT	NDE Type:		
	Results: UT on bottom head showed pitting corrosion internally – nominal 0.500” pitting to 0.425” along curvature and 8” area in center of head to 0.297” remaining			
Nozzles	Obstructions:	<input checked="" type="checkbox"/> None noted	Comment	



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	Corrosion:	<input checked="" type="checkbox"/> None noted	Comment
	Erosion:	<input checked="" type="checkbox"/> None noted	Comment
Attachments	<input type="checkbox"/> Vortex breaker	<input type="checkbox"/> Secure <input type="checkbox"/> Good Condition	Comment
	<input type="checkbox"/> Impingement plate	<input type="checkbox"/> Secure <input type="checkbox"/> Good Condition	Comment
	<input type="checkbox"/> Suction tube	<input type="checkbox"/> Secure <input type="checkbox"/> Good Condition	Comment
	<input type="checkbox"/> Demister	<input type="checkbox"/> Secure <input type="checkbox"/> Good Condition	Comment
	<input checked="" type="checkbox"/> Other: Filter plate	<input checked="" type="checkbox"/> Secure <input checked="" type="checkbox"/> Good Condition	Comment Minor surface corrosion throughout
Detailed Inspection Summary	<p>Inspection Practices: 2.0 Non-Fired Pressure Vessels Filter is showing internal pitting and corrosion at the time of inspection. Bottom head was UT'd reading throughout were 0.425" in pits along head curvature, the center areas between the nozzles in the bottom head in an 8" circular area was down to readings of 0.340" to 0.297" remaining – limited access to the area due to the internal filter holding plate. The weld on the top of the filter holder has corroded with the corrosion reaching the rubber ring area. The area around the gasket if continuing to corrode will create a leak at the top head to shell seal. Vessel is to be cleaned out at each filter change interval – filter is at the end of life – prepare for a future replacement.</p>		
Recommended Actions	<p>Due to the design of the filters the bottom head is pitting throughout, there is no access for repairing. The top plate to hold the filters is corroding along the weld to the shell – the corrosion has reached the o-ring area on the North corner. The filter is at the end of life – prepare for a future replacement.</p>		
Integrity Status	Suitable for Continued Service <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Future Repairs Required		
Inventory Status	<input checked="" type="checkbox"/> Active <input type="checkbox"/> Out of Service <input type="checkbox"/> Surplus <input type="checkbox"/> Rental <input type="checkbox"/> Scrap		

Visual External Inspection Interval: 1 yrs OR Changed to: _____ yrs.

Visual Internal Inspection Interval: 1 yrs OR Changed to: _____ yrs.

Ultrasonic Inspection Interval: **6 month** OR Changed to: _____ yrs.

PSV Interval: _____ yrs OR Changed to: _____ yrs.

Class 1 Class 2 PEI Certificate #: 128

IPV/IBPV Certificate #: _____

Inspectors Name: Ryan Hogg

Signature: 

Chief Inspector: I certify that the information on this report is true and all inspections as required by our Owner/User Quality Assurance Program # QMS-0036 which expires September 6, 2018 have been done.

Recommendations:

- Internally inspect at next filter change.
- UT after 6 month of service due to corrosion issues in the adjacent filters.
- Filters should be cleaned out on a regular basis when switching to opposite bank of filters.
- Filter is at end of life – prepare for future replacement.



